

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-12 (canceled).

Claim 13 (new): A direct methanol fuel cell system comprising:
an aqueous solution tank storing a methanol aqueous solution;
a fuel tank storing a methanol fuel to be supplied to the aqueous solution tank;
and
a fuel cell stack supplied with the methanol aqueous solution from the aqueous solution tank for generating electric energy through electrochemical reactions; wherein the fuel tank and the aqueous solution tank are disposed above the fuel cell stack.

Claim 14 (new): The direct methanol fuel cell system according to Claim 13, further comprising an air pump disposed below the fuel cell stack and arranged to supply the fuel cell stack with air containing oxygen.

Claim 15 (new): The direct methanol fuel cell system according to Claim 13, wherein the fuel tank and the aqueous solution tank are disposed side by side generally at a common height, and the direct methanol fuel cell system further comprises:
a first pipe extending downward from the fuel tank;
a second pipe extending downward from the aqueous solution tank; and

a fuel pump disposed below the fuel tank and the aqueous solution tank, and connected with the fuel tank via the first pipe, and connected with the aqueous solution tank via the second pipe; wherein the fuel pump is arranged to pump the methanol fuel supplied from the fuel tank via the first pipe to the aqueous solution tank via the second pipe.

Claim 16 (new): The direct methanol fuel cell system according to Claim 13, wherein the fuel tank is disposed above the aqueous solution tank, and the direct methanol fuel cell system further comprises:

a pipe connecting the fuel tank and the aqueous solution tank; and
an addition valve disposed in said pipe and arranged to open and close.

Claim 17 (new): The direct methanol fuel cell system according to Claim 13, further comprising a heat exchanger arranged to perform a heat-exchanging operation on the methanol aqueous solution outputted from the aqueous solution tank before the methanol aqueous solution is sent to the fuel cell stack, and the heat exchanger is disposed on a side of the fuel cell system.

Claim 18 (new): The direct methanol fuel cell system according to Claim 17, further comprising a gas-liquid separator arranged to perform gas-liquid separation of moisture content discharged from the fuel cell stack; and

a water tank arranged to store water obtained by the gas-liquid separation;
wherein

the gas-liquid separator is disposed between the fuel cell stack and the heat exchanger.

Claim 19 (new): The direct methanol fuel cell system according to Claim 18, wherein the heat exchanger includes a heat exchange pipe arranged to guide the methanol aqueous solution outputted from the aqueous solution tank to the fuel cell stack, the gas-liquid separator includes a gas-liquid separation pipe arranged to guide

moisture content discharged from the fuel cell stack to the water tank, and at least part of the gas-liquid separation pipe is arranged to face at least part of the heat exchange pipe.

Claim 20 (new): The direct methanol fuel cell system according to Claim 18, further comprising:

an air pump disposed below the fuel cell stack and arranged to supply the fuel cell stack with air containing oxygen; and

a controller disposed on a side of the air pump and arranged to control a concentration of the methanol aqueous solution outputted from the aqueous solution tank to the fuel cell stack; wherein

the heat exchanger and the gas-liquid separator are arranged to be opposed to the controller and to sandwich the air pump.

Claim 21 (new): The direct methanol fuel cell system according to Claim 18, wherein the gas-liquid separator includes a gas-liquid separation pipe arranged to allow moisture content from the fuel cell stack to flow down gravitationally.

Claim 22 (new): The direct methanol fuel cell system according to Claim 15, wherein the fuel tank includes a side surface provided with a first fitting, and the aqueous solution tank includes a side surface provided with a second fitting adapted to mate with the first fitting.

Claim 23 (new): The direct methanol fuel cell system according to Claim 13, further comprising:

a drain pipe connected with the water tank and arranged to drain water from the water tank; and

a cap attachable to and detachable from a discharging end of the drain pipe for preventing water from discharging..

Claim 24 (new): The direct methanol fuel cell system according to Claim 13, further comprising:

a drain pipe connected with the water tank and arranged to drain water from the water tank; wherein

the drain pipe is flexible and has a pivotable discharging end such that the drain pipe discharging end is located above an upper surface of the fuel cell stack.

Claim 25 (new): The direct methanol fuel cell system according to Claim 13, further comprising a gas-liquid separator arranged below the fuel tank and the aqueous solution tank.

Claim 26 (new): The direct methanol fuel cell system according to Claim 13, further comprising a gas-liquid separator arranged above the fuel tank and the aqueous solution tank.

Claim 27 (new): The direct methanol fuel cell system according to Claim 26, further comprising a water tank arranged below the gas-liquid separator and addition valves arranged to supply the methanol fuel from the fuel tank and water from the water tank to the aqueous tank.

Claim 28 (new): The direct methanol fuel cell system according to Claim 27, wherein the water tank is arranged at a common vertical level with the fuel tank and is positioned next to the fuel tank.

Claim 29 (new): The direct methanol fuel cell system according to Claim 13, further comprising a heat exchanger arranged below the fuel tank and the aqueous solution tank.

Claim 30 (new): The direct methanol fuel cell system according to Claim 29, wherein the heat exchanger is located above the fuel cell stack.

Claim 31 (new): The direct methanol fuel cell system according to Claim 13, wherein the fuel cell stack is arranged at a bottom portion of the direct methanol fuel cell system.

Claim 32 (new): The direct methanol fuel cell system according to Claim 13, further comprising a water tank and an air pump disposed in a bottom portion of the direct methanol fuel cell system below the fuel cell stack, wherein the fuel cell stack is arranged at an approximately central vertical location the direct methanol fuel cell system.